

What Is Claimed Is:

- 1 1. A method for testing the motion performance of an electronic
2 display system, wherein the electronic display system is comprised of a display,
3 graphics processing software, graphics processing circuitry, and an interface
4 coupling the display and the graphics processor, the method comprising:
5 receiving a set of test parameters;
6 using the set of test parameters to generate a video image of an object in
7 motion;
8 displaying the video image of the object in motion on the display; and
9 measuring the amount of distortion in the shape of the object in motion
10 relative to the shape of the object in a stationary state.

- 1 2. The method of claim 1, wherein the method further comprises;
2 displaying a second object; and
3 measuring the amount of distortion caused by the interaction of the second
4 object with the object in motion.

- 1 3. The method of claim 1, further comprising:
2 receiving a request to change an attribute of the object in motion; and
3 in response to the request, changing an attribute of the object in motion.

- 1 4. The method of claim 3, wherein the attributes can include one of
2 color, size, shape, shading, fill pattern, speed, direction of movement, and type of
3 movement.

- 1 5. The method of claim 1, wherein measuring the amount of
2 distortion of the object in motion relative to the object in the stationary state
3 further involves:
4 placing a ruler on a boundary of the object where the distortion occurs;
5 increasing a width of the ruler until the ruler covers the distortion; and
6 measuring the width of the ruler to determine the size of the distortion.
- 1 6. The method of claim 5, further comprising displaying the ruler
2 every n^{th} refresh cycle to minimize distortion of the ruler.
- 1 7. The method of claim 5, further comprising using the width of the
2 ruler to determine response time of the pixels in the display.
- 1 8. The method of claim 1, wherein the distortion can include one of:
2 flickering;
3 flashing;
4 smearing;
5 blurring;
6 line spreading;
7 geometric distortion;
8 color-induced artifacts; and
9 inaccurate color reproduction.
- 1 9. The method of claim 1, further comprising storing the set of test
2 parameters to a storage medium to facilitate producing an identical set of test
3 parameters during a subsequent test.

1 10. The method of claim 1, further comprising recording the measured
2 distortion on a storage medium.

1 11. A computer-readable storage medium storing instructions that
2 when executed by a computer cause the computer to perform a method for testing
3 the motion performance of an electronic display system, wherein the electronic
4 display system is comprised of a display, graphics processing software, graphics
5 processing circuitry, and an interface coupling the display and the graphics
6 processing circuitry, the method comprising:
7 receiving a set of test parameters;
8 using the set of test parameters to generate a video image of an object in
9 motion;
10 displaying the video image of the object in motion on the display; and
11 measuring the amount of distortion in the shape of the object in motion
12 relative to the shape of the object in a stationary state.

1 12. The computer-readable storage medium of claim 11, wherein the
2 method further comprises:
3 displaying a second object; and
4 measuring the amount of distortion caused by the interaction of the second
5 object with the object in motion.

1 13. The computer-readable storage medium of claim 11, wherein the
2 method further comprises:
3 receiving a request to change an attribute of the object in motion; and
4 in response to the request, changing an attribute of the object in motion.

1 14. The computer-readable storage medium of claim 13, wherein the
2 attributes can include one of color, size, shape, shading, fill pattern, speed,
3 direction of movement, and type of movement.

1 15. The computer-readable storage medium of claim 11, wherein
2 measuring the amount of distortion of the object in motion relative to the object in
3 the stationary state further involves:
4 placing a ruler on a boundary of the object where the distortion occurs;
5 increasing a width of the ruler until the ruler covers the distortion; and
6 measuring the width of the ruler to determine the size of the distortion.

1 16. The computer-readable storage medium of claim 15, wherein the
2 method further comprises displaying the ruler every n^{th} refresh cycle to minimize
3 distortion of the ruler.

1 17. The computer-readable storage medium of claim 15, wherein the
2 method further comprises using the width of the ruler to determine response time
3 of the pixels in the display.

1 18. The computer-readable storage medium of claim 11, wherein the
2 distortion can include one of:
3 flickering;
4 flashing;
5 smearing;
6 blurring;
7 line spreading;
8 geometric distorting;

9 color-induced artifacts; and
10 inaccurate color reproduction.

1 19. The computer-readable storage medium of claim 11, wherein the
2 method further comprises storing the set of test parameters to a storage medium to
3 facilitate producing an identical set of test parameters during a subsequent test.

1 20. The computer-readable storage medium of claim 11, wherein the
2 method further comprises recording the measured distortion on a storage medium.

1 21. An apparatus for testing the motion performance of an electronic
2 display system, wherein the electronic display system is comprised of a display,
3 graphics processing software, graphics processing circuitry, and an interface
4 coupling the display and the graphics processing circuitry, comprising:
5 a receiving mechanism configured to receive a set of test parameters;
6 a graphics mechanism configured to use the set of test parameters to
7 generate a video image of an object in motion;
8 a display mechanism configured to display the video image of the object in
9 motion on the display; and
10 a measurement mechanism configured to measure the amount of distortion
11 in the shape of the object in motion relative to the shape of the object in a
12 stationary state.

1 22. The apparatus of claim 21, wherein the display mechanism is
2 further configured to display a second object, and the measurement mechanism is
3 further configured to measure the amount of distortion caused by the interaction
4 of the second object with the object in motion.

1 23. The apparatus of claim 21, wherein the receiving mechanism is
2 further configured to receive a request to change an attribute of the object in
3 motion, and in response to the request, to change an attribute of the object in
4 motion.

1 24. The apparatus of claim 23, wherein the attributes can include one
2 of color, size, shape, shading, fill pattern, speed, direction of movement, and type
3 of movement.

1 25. The apparatus of claim 21, wherein the measurement mechanism is
2 further configured to:
3 place a ruler on a boundary of the object where the distortion occurs;
4 increase a width of the ruler until the ruler covers the distortion; and
5 measure the width of the ruler to determine the size of the distortion.

1 26. The apparatus of claim 25, wherein the measurement mechanism is
2 further configured to display the ruler every n^{th} refresh cycle to minimize
3 distortion of the ruler.

1 27. The apparatus of claim 25, wherein the measurement mechanism is
2 further configured to use the width of the ruler to determine response time of the
3 pixels in the display.

1 28. The apparatus of claim 21, wherein the distortion can include one
2 of:
3 flickering;

4 flashing;
5 smearing;
6 blurring;
7 line spreading;
8 geometric distorting;
9 color-induced artifacts; and
10 inaccurate color reproduction.

1 29. The apparatus of claim 21, further comprising a storage mechanism
2 configured to store the set of test parameters to a storage medium to facilitate
3 producing an identical set of test parameters during a subsequent test.

1 30. The apparatus of claim 21, further comprising a recording
2 mechanism configured to record the measured distortion on a storage medium.